

of any viscus, occasion death in half that time, from collapse equally profound, yet causing the intestines to become agglutinated and the abdominal cavity filled with masses and flocculi of coagulated lymph! Can stimuli be equally proper under circumstances so widely different? If not, how are we to perfect our diagnosis? We do not presume to answer either of these questions, but the subject is much in want of further elucidation. It should always be borne in mind in the treatment of surgical injuries, that collapse may be produced either by such general mischief to the whole nervous system as may directly oppress all the vital operations, or from such an excessive irritation as may concentrate, as it were, the whole vital energy of the system upon a point.

In taking leave of the work of Mr. Cooper, we cannot but express our regret at its want of clearness in style. With regard to matter, much might have been added in the way of praise and dissent, but we sincerely hope that other occasions will be offered from the same quarter hereafter, and that the clinical observations of London hospital practice may continue to be made public from time to time in a manner equally clear and impressive. One word to those who enjoy similar advantages in our own institutions. Why are the results of the practice of our own hospitals confined almost within the limits of their walls? The work of Mr. Cooper, while it informs us how much we might communicate with advantage to the profession, furnishes us in its arrangement with an excellent model for imitation.

R. C.

ART. XIII. *Leçons de Clinique Médicale faites à l'Hôtel-Dieu de Paris*, par le Professeur A. F. CHOMEL, Recueillies et Publiées sous ses yeux, par J. L. GENEST, D. M. P., Ancien chef de Clinique Médicale de l'Hôtel-Dieu, &c. (Fièvre Typhoïde.) 8vo. pp. 548. Paris, 1834.

Clinical Lectures on Typhoid Fever, delivered at the Hotel-Dieu of Paris. By Professor CHOMEL, Collected and Published under his Inspection, by J. L. GENEST, M. D. &c.

UNDER the denomination *typhoid*, Professor CHOMEL includes all the severe grades of continued fever, in consequence of the presumed analogy which exists between their general phenomena and those of the typhus fever of camps. However dissimilar, he remarks, the several varieties of continued fever may appear in many of their symp-

toms, yet in their general phenomena and progress they present an identity of character; which identity is still further established by the lesions discovered after death in the intestinal canal. These lesions, which consist in a morbid state of the glands of Peyer and Brunner, conjoined ordinarily with tumefaction and other diseased conditions of the mesenteric glands, are present, according to our author, in no other affection, while they are almost invariably met with in the fever under consideration, whatever may be the form which it assumes, whether inflammatory, bilious, mucous, adynamic, ataxic, or nervous. All other pathological lesions detected in typhoid fever, of whatever character, or wherever seated, M. Chomel views as merely accidental complications, the presence of which may, it is true, modify to a certain extent the symptoms of the case, but their absence does not in the least influence the peculiar characteristics of the disease. It will be perceived, therefore, that the typhoid fever of our author corresponds very nearly with the *entero-mesenteric* fever of PETIT and SERRES, the *exanthème intestinal* of M. ANDRAL, the *dothinentérite* of M. BRETONNEAU, and the *follicular enteritis* of various other writers.

The following summary of the author's description of the lesions of the intestinal follicles discoverable after death from typhoid fever, will enable the reader to form a judgment of their character.

The first alteration which the follicles of the intestinal mucous membrane experience is their tumefaction, which is occasioned by the formation, beneath the mucous membrane, of a yellowish-white matter, somewhat friable, and which gives to the cluster of follicles constituting the glands of Peyer the appearance of a patch, and to the isolated follicles or glands of Brunner the form of a large pimple of a colour more or less white, and which many pathologists have improperly denominated a pustule. These changes, which do not preserve very decidedly their characteristics beyond the twelfth or fifteenth day from the commencement of the disease, are succeeded, in the majority of cases, by ulceration. This commences sometimes at the mucous membrane and gains gradually the white matter of the tumid follicles, and in other cases it begins by a softening of the latter, which becomes detached from the parts with which it is in contact, and produces subsequently the destruction of the mucous membrane. These morbid alterations commence almost invariably in those follicles which are nearest to the ileo-cæcal valve. About the eighth, fifteenth, or twentieth day of the disease, we find, in a few instances, either at the surface of the tumefied patches, or what is more frequently the case, upon the glands of Peyer, the softened mucous

membrane, of a colour more or less intense, detached from the subjacent tissues and presenting numerous perforations, which are in fact the orifices of the follicles greatly enlarged. In proportion as the tumefied patches or their remains gradually disappear, in consequence of the progress of ulceration, or by a species of gangrene, the edges of the ulcers which are in consequence produced, become flattened, approach each other from below, and present a condition very favourable to cicatrization, or they acquire, on the contrary, a morbid thickening, caused by the hypertrophy of the sub-mucous and muscular tissues, and present an appearance which has considerable analogy with that of a tissue in a state of scirrhus. The ulceration of the tumefied patches extends not only in breadth but also in depth, and invades successively the sub-mucous and muscular tissues, and in some cases even the peritoneum, causing a perforation of the intestine, which may also be produced by sphacelus of the peritoneal coat. In the most favourable cases cicatrization of the ulcers takes place. Ulceration does not occur in all the tumefied patches; there are a certain number which return to the normal state, without ulcerating, by a species of resolution, the effused matter being absorbed. At the same time many of the patches present a dark blue or slaty colour; which colour has also been observed in subjects that have died of other diseases than typhoid fever, or a long time after having been affected with this disease. The foregoing alterations in the condition of the mucous follicles of the intestines M. Chomel declares to be peculiar to typhoid fever; in almost all cases of which they are to be met with. Of forty cases of the disease which terminated in death at the Hotel-Dieu, within five years, in every instance they were detected to a greater or less extent, and in a more or less advanced stage.

Notwithstanding, however, our author insists upon the invariable presence of the above lesions of the intestinal mucous follicles, and of tumefaction and other morbid changes in the mesenteric glands in typhoid fever, viewing them, in fact, as an essential characteristic of the disease, he does not consider them as the cause of the symptoms during life, with the exception perhaps, of the diarrhoea, pain of the abdomen, and gurgling noise produced when pressure is made with the hand upon the lower portion of the abdomen, especially upon the right iliac region. Nor does M. Chomel consider them to have any influence whatever upon the violence or progress of the disease. He sets them down as effects merely of the general morbid condition under which the patient labours.

"The lesions," he remarks, "of the intestinal mucous follicles and of the

mesenteric glands do not present the same degree of development in every case. In some, all the grouped and isolated follicles are tumefied or ulcerated, in others there are only a certain number which are altered in structure; twenty for example in some cases, in others fifteen, and in others only five, three, two or even one, and that sometimes only partially. Now if all the symptoms of the disease and its severity depended upon the lesion of the follicles, there would certainly exist a relation between the phenomena during life and the extent of the lesions discovered after death; while also the violence and danger of the case would be in direct proportion with the number of the follicles affected, and the extent of the alteration in each. But it is shown by accurate observations that, in one patient the disease will show itself with symptoms of the utmost severity, and after death but a very small number of follicles will be found affected; while in another patient, the typhoid symptoms will present but a very moderate degree of violence, but should he die in consequence of the accidental occurrence of another disease, we shall find the intestinal follicles presenting the most extensive lesions."

Among the accidental lesions, or those which appertain less especially to typhoid fever, M. Chomel enumerates ulcerations of the tongue, fauces and œsophagus. Redness of the mucous coat of the stomach varying in intensity in different cases; but which the author maintains we have no evidence to attribute positively to inflammation. Softening of the mucous membrane at the great extremity of the stomach; in a few cases softening of the greater portion of the mucous coat, and still more rarely softening of all the coats. Softening of the gastric mucous membrane to a greater or less extent was present in fourteen out of forty-two cases. According to M. Chomel it is not met with more frequently after death from typhoid fever than in subjects who die of other diseases. Occasionally thickening or thinning of the mucous membrane was detected. In the intestines the duodenum and jejunum, presented in the majority of cases, a deeper red colour than the remaining portion of the intestinal tube. This redness was mixed with a shade of yellow, which diminished ordinarily as we proceed from the jejunum, but which in some cases continued even to the ileo-cœcal valve. The ileum was frequently increased in redness, sometimes throughout all its coats, presenting on the external surface numerous arborescences. Sometimes the redness was confined to the mucous coat; in this latter case the free edge of the valvulæ conniventes were occasionally of a very bright red. They appeared as though they had been stained by red blood coming from their vessels, but the redness was not removed by washing the parts in water. More frequently the redness of the ileum was disposed in zones, which were separated from each other by zones of equal breadth where the three coats were remarkably pale. The parts where the redness was the most

decided were in these cases ordinarily in those portions of the intestinal circumvolutions which occupied a depending situation, relatively to such as preserved a pale tint. In a considerable number of cases the half or two-thirds of the ileum were decidedly increased in redness, while the residue of the intestine remained comparatively pale; ordinarily the red portion was situated in the pelvis, while the paler remained in the abdomen. The increased redness of the mucous membrane was not more decided in the neighbourhood of the diseased follicles, than at a distance from them. The colour of the mucous coat of the large intestines offered fewer varieties than that of the small. It rarely presented any considerable redness throughout its whole extent; very often it was found covered with red spots, varying in size, which were sometimes of so deep a colour as to resemble ecchymoses. It is but seldom, according to our author, that that portion of the mucous coat of the intestines which separates the clustered or isolated follicles, is softened in so great a degree as is found to be the case in the stomach. In three out of forty-two cases the mucous coat of the small intestines was found reduced to the consistency of a layer of gum Arabic. In one case the mucous coat of the ileum was softened at some points, but not at those parts where the redness was the most vivid. In another the mucous coat of all the upper portion of the same intestine was reduced to the consistency of mucilage.

"We may conclude," remarks M. Chomel, from a comparison of the symptoms during life with the lesions discovered after death, "that the different pathological conditions of the stomach, whether the state of injection, softening or the slaty colour which it sometimes presents, or finally the thickening of its mucous coat in subjects who have died whilst labouring under typhoid fever, do not manifest themselves constantly by any particular symptom previously to death, and that it is impossible to say from the symptoms of the case with certainty, whether any appreciable alteration exists in the stomach, or what is the nature of such alteration."

The same, he adds, may likewise be said in regard to the lesions discovered in the intestinal tube.

In several instances a sanguineous infiltration of the intestinal mucous membrane was met with. In these cases the mucous membrane was double or even triple its ordinary thickness, and offered a very peculiar aspect, resembling somewhat a layer of jelly of a black, red or only rosy colour; having also its shining and tremulous appearance. If over the portions thus infiltrated with blood, the handle of a scalpel was passed with a moderate degree of force, from the pores of the membrane there was found to issue a fluid more or less red, and sometimes in considerable quantity, the membrane at the same time re-

turning to its natural thickness, and sometimes even to its ordinary hue. The parts thus engorged varied in extent in different cases from four inches to two or three feet. The redness was always continuous, and occupied the whole area of the intestine, the portions the most inferior presenting no difference from those situated above. In those instances in which the fluid infiltrated was of a light red colour and transparent, by the naked eye numerous small vessels of a deeper colour could be discovered permeating the whole of the affected tissue, the extremities of which would appear to terminate on the surface of the mucous coat. Of the seven subjects affected with typhoid fever, in whom after death the above lesions was discovered, two had experienced intestinal hæmorrhages, a third had discharged blood by vomiting; in two others the small intestines contained a quantity of blood, and the other two, so far as could be ascertained from the observations made at the hospital, had been unaffected with hæmorrhage.

After the mucous follicles of the intestines, the spleen, according to M. Chomel, is the organ most frequently found in a morbid state in those who die of typhoid fever. In almost every case the spleen was increased in size. Sometimes the increase was inconsiderable, at others the organ was double, triple, or even quadruple its ordinary size. Although the augmentation in size was generally most considerable in those subjects who died during the most acute period of the disease, before, namely, the twentieth or twenty-fifth day, yet no very great difference was observed between the bulk of the organ in those who sank during the first days of the disease and those who survived a somewhat longer period. Subsequently to the twenty-fifth day the size of the organ was in general reduced. To this, however, there were many exceptions. In a certain number of cases the spleen was not only increased in size, but also singularly diminished in density. Ten times it was found more or less softened, and thrice it was completely diffuent. In other instances, in place of being softened, it presented a degree of firmness that it rarely possesses during a state of health. This was generally found to be the case after the twentieth day, when the other organs were regaining their normal condition. The colour of the spleen was variously changed; no one, however, of these morbid states of the spleen is connected, we are told, with any particular symptom or form of typhoid fever.

Of the liver, the only morbid state which was observed after typhoid fever, sufficiently often to demand particular attention, was a softening, more or less considerable.

"The softening of the liver as well as the spleen," remarks M. C. "was ordinarily accompanied with a softening of other organs and even of those which

are the most important to life. This fact proves that the softening was not the result of inflammation; for it would be difficult to conceive how so many important organs could at the same time be inflamed without life being instantly extinguished. We also perceive, in part at least, the reason why the lesions alluded to are not manifested during life by any particular symptom."

The changes observed in the state of the blood in those who die from typhoid fever are, according to our author, sufficiently distinct from those we observe ordinarily after other diseases to merit particular attention. More frequently the blood was black and completely diffuent; very rarely small fibrinous coagula were found in the heart, and still more rarely in the blood-vessels. In other cases, the blood, without being completely diffuent, was found in the heart or aorta in the form of coagula of a black colour, and very different from those we meet with in subjects who have died of other acute affections.

"The absence of fibrine in the blood of those subjects who die of typhoid fever is the most striking, and perhaps the most important modification which that fluid presents; the same has been observed in regard to the blood drawn from a vein during the life of the patients.

"Another alteration observed, but more rarely, in the blood of subjects who have died of typhoid fever, is the development of a quantity, more or less considerable, of gas in the interior of the blood-vessels, especially the veins. In some subjects, if we lay bare a large vein, at a part where it does not receive branches, we can often observe bubbles of gas, which may be made to move along the vessels, and are perceptible through its thin and almost transparent coats."

In these cases, it is remarked, the blood presents other traces of commencing decomposition. Often it resembles coffee-grounds floating in an oily fluid.

In numerous cases the consistency of the parietes of the heart was found decidedly diminished; in none did it appear to be increased. Sometimes the softening was to so great an extent that the muscular tissue of the organ broke down between the fingers with the greatest ease. In general this diminution in the consistency of the tissues of the heart coincided with the softening of the other organs. In other cases in which the diminished consistency of the muscles of the heart was not so evident, the organ was found in so flaccid a state that its parietes sunk together similar to those of a simple membranous bag.

In thirty cases in which the condition of the heart was noted with care, in four there was slight softening and discoloration of all the tissues, in three softening and discoloration of the left ventricle only, in one discoloration without softening, in seven flaccidity without softening, and in fifteen the heart was in a normal condition.

The colour of the lining membrane of the heart was sometimes of a brighter red than natural, in others the redness was more deep or even

livid more frequently, especially when accompanied with softening of the muscular tissue the lining membrane was almost entirely destitute of colour. In no instance did this membrane present the characters proper to inflammation; thus it was never found covered with pus or false membranes, nor presenting a granular appearance. In some cases the internal membrane of the heart alone presented an increase of redness, while that of the aorta and great arterial trunks preserved its normal hue. Frequently the internal membrane of the aorta was of a morbid redness, but the characters of this redness, according to M. C., were far from indicating it to have been the effect of inflammation. In no instance did it result from an injection of the capillaries, but seemed rather to be owing to the imbibition of the more fluid portion of the blood. It has almost always appeared to the author to be connected with the *putridity* of the blood which was found in contact with the membrane.

With respect to the lesions observed in the respiratory apparatus, the author enumerates œdema of the glottis, and occasionally ulceration laying bare the cartilages. The larynx, he remarks, was also occasional the seat of ulceration. The morbid appearances met with most constantly in the lungs were those which occur just before death, such as an engorgement at their posterior and inferior portions. In a certain number of cases this engorgement was accompanied with a degree of softening sufficient to allow of the finger penetrating with ease the tissues of the organ. In a few instances the lungs were affected with genuine pneumonia; sometimes the pneumonia was confined to some of the lobules of one lung, accompanied most frequently with suppuration. In other cases the pneumonia occupied an entire lobe; in this case the patient generally sunk before the occurrence of suppuration.

"Sometimes we observed an emphysematous or œdematous condition of different parts of the lungs, and finally in other instances a pleuritic effusion more or less considerable. In forty-two cases, all, with the exception of ten, presented a morbid condition of the lungs. In eighteen there existed engorgement alone or connected with softening; in three hepatization in the first degree; in two hepatization in the second degree and on a single side; in three lobular pneumonia; in two emphysema; in two œdema; and in two pleuritic effusion. These different alterations, however, remarks M. C. have but a very remote connexion with the typhoid fever, and seem to us to depend rather upon the state of debility in which the patient is sunk, which produces in him a greater susceptibility to morbid causes. In fact, this species of complication is never met with when the patient dies a few days after the attack of fever, but only at a more advanced period."

The morbid alterations discovered in the brain after death from

typhoid fever, exert as little influence, according to M. Chomel, in the production of the phenomena of the disease, as those detected in the other organs.

The delirium, he remarks, which so commonly accompanies typhoid fever, is the most frequently unconnected with any appreciable lesion of the brain. We find, it is true, in a certain number of cases, two conditions of that organ which present a decided deviation from what is commonly considered its normal state; namely, the œdema of its membranes, and an appearance of red points throughout its substance when an incision is made into it.

"But," he adds, "as these conditions occurred as frequently in those cases in which no disorder of the intellectual functions was present as in those where this disorder existed, and as they are as frequent in other diseases as they are in the disease under consideration, we can draw from them no positive deduction."

The serous infiltration of the pia mater and arachnoides occupied most generally those parts which cover the hemispheres, but occasionally he found it also towards the basis of the brain. Sometimes there was a decided congestion of those membranes, but in examining with attention it was found to be ordinarily confined to the venous tissue, the great trunks of which were greatly distended. In a few instances the congestion was so great as to produce an effusion of blood into the tissue of the membranes to a considerable extent.

The brain was often slightly softened throughout; an alteration which M. Chomel conceives to be connected with the softening of the other organs so frequent in the disease before us. Finally, in some cases the brain appeared to be increased in density, but this alteration, if it be such, remarks the author, like the others was not connected with any particular period of the disease. Of thirty-eight cases in which the state of the brain was carefully examined, four presented injection of the meninges; seven œdema of the meninges; six slight general softening; twelve serous effusion into the ventricles, varying from a tea-spoonful to a table-spoonful; five presented bloody points throughout the cerebral substance; two abnormal density, and in fifteen there was no alteration whatever.

From the foregoing summary of Professor Chomel's autopsical investigations of typhoid fever, it will be perceived that he considers the whole of the lesions discovered after death to be altogether unimportant, either in explaining the causes concerned in the production of the disease, the character of its successive phenomena, or its mildness or malignity. Typhoid fever he conceives to be a certain

morbid state of the whole organism, dependant probably upon an altered condition of the fluids; the symptoms by which it is manifested being "the expression of the influence of the general morbid condition upon the entire economy and resulting from the disorder of the principal functions to which the disease gives rise;" in other words, that they appertain rather to the typhoid fever itself than to any organic lesion. The morbid appearances so commonly detected after death, M. Chomel seems to think, are produced secondarily by the action of the disease upon the organs. He admits, however, that it is difficult to explain by what mysterious influence many of these lesions, so different in their character, are produced in the present form of fever. All this may perhaps be very good pathology, but it appears to us to be any thing but clear and satisfactory.

Towards the close of the work M. Chomel enters into a series of arguments to prove the difference which exists between a primitive and local inflammation and one that is secondary and disseminated. According to his definition, an inflammation is primitive and local when it alone constitutes the disease, and occupies, continuously, a surface of greater or less extent—it is secondary and disseminated when it is the result of a morbid condition of the entire organism, and occurs at a number of different points between which the parts are in a normal condition. We believe it to be unnecessary to enter into any examination of our author's obsolete views on these particular points. His reasoning in support of them is altogether vague and inconclusive, and his illustrations, so far from strengthening his premises, are either mere assumptions, or at best require further evidence to establish their correctness.

As the terms typhus and typhoid are in themselves extremely indefinite, and have been applied to a great variety of diseases by different writers, many of which diseases have been shown to be very distinct in their pathological character, it is all-important to ascertain precisely in every case what are the morbid phenomena which they are employed to designate. Hence our author has, in the commencement of the work before us, very properly presented an admirable history of the disease denominated by him typhoid fever, in which the character and succession of the general symptoms are described with great minuteness and clearness. The great length of this precludes the possibility of our translating it entire, and no abstract of it would convey a distinct idea of the disease which it is intended to delineate. We prefer, therefore, to select the more prominent of the author's diagnoses, which will present, with tolerable accuracy, the general characteristics of what he terms typhoid fever.

"During the first days of the disease," remarks M. Chomel, "it is often impossible to determine positively whether it be typhoid fever or some one of those affections with which it more or less corresponds. In a number of cases, however, even from the very commencement, we may suspect the nature of the malady; thus, if it attack suddenly; if to the decided febrile symptoms there is joined, without our being able trace it to any appreciable cause, a permanent pain of the head with vertigo and a staggering gait, and this in a subject at the particular period of life we have indicated.* Particularly if he has inhabited but for a short time a large city, and if there is reason to believe that he has not already suffered from the disease,† in all probability he is labouring under typhoid fever. This may be decided with more certainty if, in addition to the first symptoms, there occur successively, after the second or third day, some one of the other symptoms most common in the disease, such as purging, prostration of strength, commencing stupor, and a discharge of blood from the nose.

"One of the most important phenomena of the typhoid malady is the duration of the fever. When febrile symptoms that we cannot refer to any appreciable lesion are prolonged beyond a certain period, eight or ten days, for example, we have serious cause for suspecting that they are connected with disease of the glands of Peyer.

"During the middle period, most frequently from the sixth to the twelfth day of the disease, we see appear certain symptoms which, in the greater number of cases, should leave no doubt in regard to the diagnosis, namely, meteorism of the abdomen, the typhoid eruption,‡ stupor, which in the majority of cases is considerable, epistaxis, and hæmorrhages from the bowels.

"At an advanced period of the disease it is still more rare that any doubt can exist as to the nature of the disease. If the phenomena proper to the first or second periods have been uncertain, this will not be the case with those which mark the third stage. Hæmorrhages from the intestines, the ulcerations which occur upon different parts of the body, involuntary discharges from the bowels, the strongly-marked symptoms of adynamia, occur successively, and fix with certainty our diagnosis."

The disease which at first view, we are told, would appear to be the most readily confounded with typhoid fever is enteritis. Enteritis, however, is observed in subjects of every age, is the result of

* According to M. Chomel, typhoid fever attacks individuals between the age of eighteen and thirty, when the strength of the body is the most fully developed; it is rarely observed after forty; and no case has yet been recorded in which the disease has attacked an individual aged over fifty-five years.

† M. Chomel believes that typhoid fever ordinarily occurs but once in the same individual.

‡ Small red spots, which disappear upon pressure, about a half a line to two lines in diameter, of a circular form, and but a little or not at all elevated above the skin. They are spread over the abdomen, sometimes over the chest, more rarely over the thighs and arms. These small spots are more evident in proportion as the skin is fair. Their number cannot be accurately determined, because they are not all equally apparent; but to render them a characteristic of typhoid fever, they should be to the number at least of fifteen or twenty.

causes for the most part appreciable, and may occur a number of times in the same individual; circumstances which are not true of typhoid fever. The invasion of enteritis may be sudden, but never unexpected as in typhoid fever. The febrile symptoms are less developed, and generally of shorter continuance; the discharges from the bowels are more numerous, more painful, and attend the whole course of the disease; while in typhoid fever they often occur only at an advanced period, or are even entirely absent. The prostration of strength when it is present in enteritis is never so decided as in typhoid fever; the adynamia, stupor, dark coating of the tongue and gums, the involuntary evacuations, the ataxic symptoms, delirium, subsultus tendinum, are extremely rare in enteritis, as well as the eruption of red spots, the sudamina, meteorism, ulcerations of the parts upon which the patient lies, &c.

With respect to colic, the character of the pains, and the absence, in the majority of cases, of the general phenomena peculiar to typhoid fever, will enable us readily to distinguish the two affections.

A latent inflammation, when it occurs under the circumstances in which typhoid fever usually attacks, and presents one of the forms under which it is the most frequently observed, may cause some uncertainty in the diagnosis; but an attentive observation of the phenomena which occur during a few days will, even in the most obscure cases, enabled us to decide with certainty.

The acute phlegmasiæ occurring in old persons will frequently from the commencement, or after a short time, assume an adynamic form; the same is true also of the diseases of the urinary organs in similar subjects. The age of the patients is here sufficient to enable us to decide that they are not cases of typhoid fever, as the latter affection occurs only in young persons.

Among the diseases which may be easily confounded with typhoid fever, phlebitis is the most prominent. But it is very rarely that this disease is developed spontaneously; most frequently it results from wounds, or surgical operations, particularly venesection, and likewise subsequent to parturition. These circumstances will suffice to direct the physician to a correct diagnosis. From a retention of a part of the placenta in the uterus, after delivery, for several weeks, well-marked adynamic symptoms often occur, and which may be taken for those of typhoid fever. Examination of the uterus and the sanious discharge per vaginam will here prevent any mistake, and besides it is extremely rare to meet with typhoid fever during the puerperal state.

Latent peritonitis complicated with adynamia in a young subject, constitutes one of the cases in which a correct diagnosis is the most difficult. Peritonitis, however, is most frequently attended with

vomiting, constipation, effusion to a greater or less extent in the abdomen, or a sinking in of the abdominal parietes, which appear, as it were, glued to the vertebral column; while typhoid fever is accompanied with diarrhoea, even involuntary stools, and a meteorism more or less extensive, of the abdomen.

There are cases of typhoid fever of the ataxic form in which the diagnosis is to a certain degree difficult from the analogy of the symptoms with those of the cerebral phlegmasiæ. This difficulty will exist especially when the patient is already in a state of violent delirium, or profound coma, with subsultus tendinum or permanent contraction of the limbs, and we have no accurate information as to his previous symptoms. If the skin does not present the lenticular rosy spots, if there is no indication of a hæmorrhage having occurred from the nostrils, and if there is no diarrhoea, we cannot decide in such cases positively that the disease is typhoid, and we shall be obliged to remain in doubt for several days.

The foregoing remarks of the author upon the diagnosis of typhoid fever, are presented, as we have already said, to give our readers some idea of the morbid phenomena to which that term has been applied by M. Chomel. It will be evidently perceived from these remarks that the author considers typhoid fever to be a specific disease, and to require to a certain extent a specific mode of treatment; an opinion, however, which he is very far from having established by the facts which he has adduced. Notwithstanding M. Chomel professes to draw his inferences invariably from repeated clinical observations, yet from an attentive perusal of the work before us, it will be found that his pathological views of typhoid fever are little else than a series of hypotheses, the premises upon which they are founded being unsupported either by the morbid phenomena presented in the course of the disease, or the nature of the lesions discovered after death.

The author's remarks upon the remote and exciting causes of the disease are as little satisfactory as those in relation to its nature. The causes of typhus fever, he observes, are enveloped in the greatest obscurity. We are well acquainted, it is true, with some of the circumstances under the influence of which it is most frequently developed; but the exciting cause, that by the action of which it is actually produced, has as yet escaped all our investigations. We have already referred in a note to the statement of the author in regard to the period of life, to which according to his observations the disease is almost exclusively confined; namely, that between the eighteenth and fiftieth years. He has also found it most liable to affect persons recently arrived in a large city. It more commonly prevails,

likewise, during periods when there exists a scarcity of the necessities of life, as well as during periods of general distress from whatever this may result. In regard to the question of contagion, the author has with great fairness presented the arguments on both sides, but appears himself to incline to the affirmative side. Nevertheless he admits that if the disease be really contagious, it is so only in a very feeble degree, and under circumstances which have as yet not been satisfactorily determined.

We cannot follow M. Chomel in his description of the symptoms which mark the several forms of typhoid fever, nor his account of the phenomena which indicate the mildness or malignancy of the disease, or point to a favourable or unfavourable termination; and we have but a few remarks to make upon the author's directions for its treatment.

In the mildest and most simple cases of typhoid fever, he directs, at the very commencement, the detraction of blood from the arm, which has the effect of diminishing the pain of the head and shortening its duration, and of preventing the development subsequently of more serious symptoms. When the pain of the head is very severe, he likewise recommends the application of leeches behind the ears with cold applications to the scalp. In addition to the above, the remedies are cooling drinks, mucilaginous injections, daily repeated, and emollient cataplasms or fomentations to the abdomen when this is painful; when the pain is acute leeches also are to be applied. When the heat of the skin is considerable the body is to be sponged with cold vinegar or water. If there is a tendency to coma or delirium, hot applications or sinapisms are to be applied to the extremities. If the bowels are not freely opened, mild laxatives are to be administered; if diarrhoea be present, this is to be restrained by mucilaginous drinks, starch injections, &c. The foregoing, in conjunction with the strictest cleanliness, pure air, a proper regulation of temperature, &c. constitutes the whole treatment necessary in the milder forms of the disease.

In the inflammatory form of typhoid fever he directs bleeding and the ordinary depletory remedies, more or less vigorously employed, according to the age and vigour of the patient, and the intensity of the symptoms; with this precaution, however, that these remedies must not be carried to the same extent as in other inflammatory affections.

In the bilious form of typhoid fever a nearly similar treatment is demanded; in certain cases both emetics and purgatives will be proper. In the mucous variety the same remedies will in general be required as in the more simple form; only in place of mucilaginous or acid drinks the author prefers those which are slightly bitter or aromatic.

In the ataxic form, when the symptoms are of an inflammatory type, depletory remedies are demanded; when adynamic, tonics should be resorted to. In the purely adynamic form of typhus fever, the proper treatment will consist in the judicious administration of tonics, aromatics and stimulants, as wine, camphor, and sometimes ether.

"It is important, however," he remarks, "not to commence upon a tonic treatment during the period when the reaction, already too intense, might by such a treatment be excited to an unfavourable extent. At the same time, it is not less important that we do not delay our tonics until the strength of the patient is completely exhausted and cannot again be roused. It is difficult to indicate precisely the period of the disease at which all depletory remedies should be suspended and tonics be commenced with; it is at the bedside of the patient rather than from books that this point is to be determined.

"Wine, which in this disease is at once an active remedy and admirable aliment, is not equally well adapted to every case. If there be present delirium or symptoms of cerebral congestion, its use should be suspended, as it will then have the effect of very certainly increasing these affections."

When administered it is to be given in spoonful doses, at first one or more times per diem, subsequently every few hours or every hour, and at a more advanced state still more frequently, mixed with the ordinary drinks of the patient. The use of the wine is to be restricted as much as possible to the intervals of the exacerbations.

Ether is said to be useful, more especially when we desire to rouse promptly the actions of the system.

M. Chomel presents some very favourable but cautious observations in regard to the treatment of typhoid fever by the chloride of soda. In the proportion of one to two grains to an ounce of mucilage or weak bitter infusion it was given internally; the patient taking of this solution from three to five basins of eighteen ounces each during the day. It was also given in injections combined with mucilage in a similar proportion, night and morning; the body was washed with the pure chloride four times in the twenty-four hours, the cataplasms applied to the abdomen were also sprinkled with it, and to each of the baths in which the patient was immersed a pint was added, the coverings of the bed were sprinkled with it at short intervals, while vessels filled with it were placed beneath the bed. In 1831 *five* patients were treated in this manner, *all* of whom recovered, while of *fifty-one* subjects treated without the chloride, *sixteen died*. From November to August, 1832, *twenty-three* patients with typhoid fever were admitted into the Clinic. *Fifteen* of these, the symptoms of which were very severe, were treated by the chloride of soda, and *eight* without it. *Five* of the latter with symptoms of little severity were cured. Of the first, *thirteen* recovered; one of the fatal cases presented after death hepatization of the lungs and tubercles. From November, 1832,

to March, 1834, *fifty* subjects affected with typhoid fever were admitted. *Thirty-seven* of these were treated by the chloride, and *thirteen* without it; in eight of the latter the symptoms were very light, in the other three the disease was complicated with pneumonic symptoms. *Five* of the thirteen died. Of the thirty-seven treated by the chloride of soda twenty-five recovered. One of those which died was attacked with cholera, another with pneumonia, another with perforation of the lungs and pneumo-thorax during convalescence. A fourth was brought in in a dying state, and two others were affected with inflammation of both lungs.

"Although the results," remarks M. Chomel, "of the treatment of typhoid fever by the chloride of soda, have been very different in different years, the remedy is nevertheless that which has been attended with the greatest degree of success. Many distinguished physicians have made to us a similar statement in regard to it. We continue therefore to test this mode of treatment which, combined with other remedies adapted to the symptoms of each case, notwithstanding its frequent failure, has presented results more favourable than those obtained from any other."

It is proper to remark that we have given above merely an outline of the author's directions for the therapeutical management of the fever under consideration; we pass by his remarks in regard to individual remedies, and to the modifications of treatment demanded for particular symptoms and the complications by which the disease is occasionally attended; not because they are in our opinion injudicious or incorrect, but from their possessing no particular novelty; they are the same as would be adopted by every enlightened physician.

The present work of M. Chomel, a brief and perhaps imperfect notice of which we have now presented to our readers, is unquestionably one possessed of no uncommon degree of interest from the accuracy and distinctness with which it delineates the various morbid phenomena connected with a highly important class of diseases. And yet the degree in which it advances the actual amount of our knowledge in regard to the pathological character of these diseases is but small. Notwithstanding the numerous well-observed facts which the author presents in relation to typhoid fever, are in themselves important, yet his reasoning from these facts is in too many instances vague and unsatisfactory. He has erected a certain concurrence and succession of morbid phenomena into an entity which, according to his views, acts upon the organs, producing in them various lesions; and he has described disordered functions, which, were we to admit all his conclusions as correct, we must view as being totally unconnected with any morbid condition of the organs upon the action of which those functions are dependent.

D. F. C.